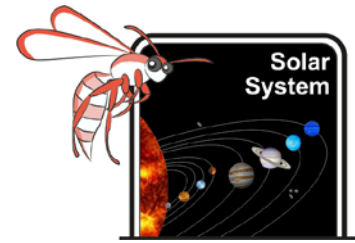


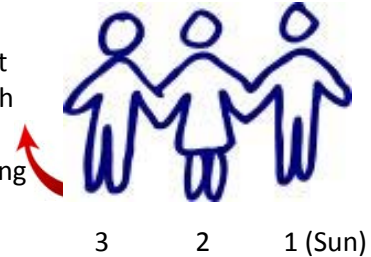
# Circling the Sun – Student Activity



This experiment will give us information about the time it takes our planets to orbit the Sun.

## Materials

- Space for up to 9 students to hold hands and wheel/orbit round one central student who represents the Sun, which is the centre of our solar system.
- Each additional student represents another planet orbiting the Sun.



## Method

1. Split into groups of six or more students
2. The first student (The Sun) stays on the same spot and swivels all the way round.
3. The second student is the first planet to orbit the Sun. They hold hands with the Sun and take one step per second (or one - Mississippi) and count how many steps they needed to complete one orbit of the Sun and return to where they started. These results are entered in the table provided.
4. The third student holds the second student’s hand and repeats the process. The first two students simply adjust their step to move in time with the third.
5. This is repeated until all students in the group have orbited their Sun
6. The groups share and compare their results in the table provided

## Results

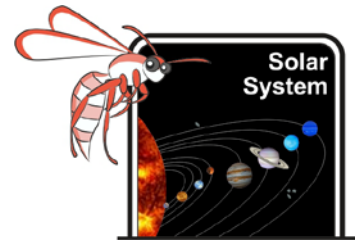
	Number of seconds taken to complete an orbit			
	Group1	Group2	Group 3	Group 4
Student 1				
Student 2				
Student 3				
Student 4				
Student 5				
Student 6				
Student 7				
Student 8				
Student 9				

## Conclusion

Could you see a pattern forming as more and more students/planets joined hands to circle the Sun?

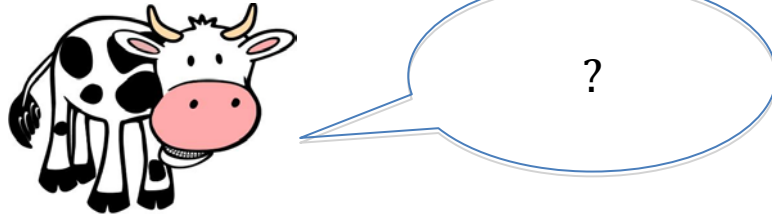
Describe this pattern. \_\_\_\_\_

## Circling the Sun – Student Activity



### Discussion

Did the cow moo softly?



Many students use the mnemonic (memory help) **“COWS MOO SOFTLY”** to ensure a fair test is carried out in science experiments.

**C** reminds us to **C**hange only one thing.

What was the one thing we changed? \_\_\_\_\_

**M** reminds us to **m**easure one thing.

What was the one thing we measured? \_\_\_\_\_

**S** reminds us that everything else has to stay the same.

Was everything else we used the same for each group? \_\_\_\_\_

Did the cow moo softly? Explain your answer \_\_\_\_\_

\_\_\_\_\_

What could you do to correct this mistake? \_\_\_\_\_

\_\_\_\_\_

What else was flawed about the position of the planets around the Sun? \_\_\_\_\_

\_\_\_\_\_

Using the information we gained from this activity, would the planet Mercury, which is closest to the Sun, take more or less time to complete one orbit than Neptune, which is further out?

\_\_\_\_\_

What do we call one orbit of the Sun by Earth? \_\_\_\_\_

Mercury takes 88 Earth days to orbit the Sun once, Earth takes about 365 Earth days and Neptune takes 60,189 Earth days. Which planet would give you the most birthday parties in one period?

\_\_\_\_\_

Do you think that you would age faster and die younger if you could live on Mercury? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_